

Remarks

Claims 13, 15-16, 18-21, and 24 were pending. Claim 13 is amended herein; claims 25-30 are added; and claims 13, 15, and 19-21 are canceled. As a result, claims 16, and 24-30 are pending.

The new and amended claims are supported throughout the originally filed specification and claims. Amended claim 16 is supported, e.g., by originally filed claim 16 and page 4, lines 3-6; page 11, lines 14-18. Claim 25 is supported, e.g., by originally filed claim 17 and at page 1, lines 12-13. Claim 26 is supported, e.g., by originally filed claim 17 and at page 1, lines 12-13 and page 21, lines 14-15. Claim 27 is supported, e.g., by originally filed claim 13. Claims 28-30 are supported, e.g., by originally filed claims 10-12 and at page 6, lines 1-14, and page 11, lines 14-18.

The Rejection of the Claims Under 35 U.S.C. §112, First Paragraph

Claims 13, 15, 16, 18-21, and 24 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This rejection is respectfully traversed.

Claims 13, 15, and 19-21 were canceled, obviating the rejection of those claims.

The Examiner stated that claim 16 was indefinite for omitting essential steps because claim 16 is an in vivo method and it is unclear how the sample required for step (b) is to be obtained. The amended claim 16 is no longer limited to an in vivo method. In addition, step (b) does not recite a "sample."

When the method is carried out in vivo, the glucocorticoid or test compound would, of course, be administered to an experimental animal, such as a mouse. The specification discloses how to compare the number of osteoblast and osteoclast cells undergoing apoptosis following treatment with the glucocorticoid to the number undergoing apoptosis following treatment with the test compound. Example 7 discloses that sections of bone from mice are mounted on glass slides and apoptotic cells can be detected by TUNEL reaction on the tissue sections on the slides. Page 9, lines 3-9 of the specification also discloses that morphometric features such as nuclear fragmentation and condensation of chromatin can be used to detect apoptosis. Detection of apoptotic

osteoblasts and osteoclasts in human bone biopsy samples is also described in Example 13 and shown in FIGS. 5A-C.

Thus, it is clear from reading the specification how one can detect apoptotic osteoblasts and osteoclasts to conduct the comparison of step (b) in claim 16. No essential steps are omitted from claim 16.

In view of these amendments and remarks, Applicants respectfully request withdrawal of the rejection of the claims under 35 U.S.C. § 112, second paragraph.

The Rejection of the Claims Under 35 U.S.C. §112, First Paragraph

Claims 13, 15, 16, 18-21 and 24 were rejected under 35 U.S.C. §112, first paragraph, because the specification, while being enabling for a method of screening for compounds that cause less bone destruction (as measured by apoptosis) than do glucocorticoids in vitro or in vivo in a murine animal model, allegedly does not provide enablement for a method of screening for compounds that stimulate bone development or that increase bone mineral density in patients with osteoporosis other than glucocorticoid-induced osteoporosis. This rejection, insofar as it may apply to the amended claims, is respectfully traversed.

Claim 13 is canceled. Claim 16 and the other pending claims depending from it now recite a method of screening for compounds that cause less loss of bone mineral density than a glucocorticoid. This is close to the claim language that the Examiner said was enabled, so Applicants believe that this obviates the rejection.

The specification discloses that glucocorticoid administration decreases bone formation rate and bone mineral density and increases apoptosis of osteoblasts and osteocytes (page 3, line 16 to page 4, line 2; FIGS. 3-5, and Examples 12 and 13). It discloses that the invention is directed to screening compounds that retain the anti-inflammatory properties of glucocorticoids while lacking the bone degeneration properties associated with long-term administration of glucocorticoids due to apoptosis of osteoblasts and osteocytes. Thus, a test compound that causes less apoptosis of osteoblasts and osteocytes than a glucocorticoid is expected to cause less loss of bone mineral density than the glucocorticoid.

In view of these amendments and remarks, Applicants respectfully request withdrawal of the rejection of the claims under 35 U.S.C. § 112, first paragraph.

Conclusion

Applicants believe that the claims are in condition for allowance. The Examiner is invited to telephone Applicant's attorney (651-207-8270) to facilitate prosecution of this application.

Respectfully submitted,

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